

## THE END RESULTS FOLLOWING OPERATIONS FOR CARCINOMA OF THE BREAST.

BY JOHN CHADWICK OLIVER, M.D.,  
OF CINCINNATI, OHIO,

Professor of Surgery in the Miami Medical College; Surgeon to the Cincinnati, Presbyterian, and Christ's Hospitals.

I HAVE assumed in preparing this article that one is expected to confine his observations to patients upon whom he has operated and to give the results of his personal experience. It has been utterly impossible for me to obtain "the end results" in such a large number of cases operated upon in the charity wards of the hospitals that it seems necessary to omit any reference to patients who could not be followed after they left the hospital. I have therefore omitted from consideration all patients except those private cases whose subsequent histories could be accurately obtained either from personal observation, or by correspondence with their family physicians. One cannot present a complete list even of this class of cases, either because some of the patients have removed to new localities or the physician who referred the patients to me may have died or removed from his original location.

The histories of the patients herewith reported are complete up to April 1, 1907, and I am sure that each statement is based upon authentic information. A tabulated statement is appended for convenience of reference. No case is reported which has not passed the three-year limit or has died before the expiration of that period of time. It is possible that the statistics herewith given are somewhat better than has been the average in my work. I believe this to be true, because the patients grouped in this report represent the more intelligent class of people, as well as those best able to care for themselves.

The complete histories of 35 patients with carcinoma of the breast are presented herewith. Twenty-two, or 62.85 per cent., are dead from recurrence of the disease, while 12

SYNOPTICAL TABLE OF CASES OF CARCINOMA OF THE BREAST.

Seq. num.	Name.	Time between dis- covery and operation.	Breast site affected.	Segment of breast involved.	Rapidity of growth.	Glandular involvement at time of operation.	Time of recurrence.	Sites of recurrence.	Time be- tween oper- ation and death.	Alive.
1	Mrs. B.	15 months.	R.	Upper, outer.	Slow.	Extensive.	6 months.	Axillary glands op. breast skin.	2 y., 2 m.	
2	Miss S.	1 year.	R.	Whole breast.	Rapid.	Very extensive.	3 months.	Axilla and stomach.	6 months.	
3	Mrs. F.	3 months.	R.	Upper, outer.	Rapid.	Extensive.	3 months.	Local and neck.	2 years.	
4	Mrs. D.	1 year.	R.	Upper, outer.	Rapid.	Extensive.	3½ months.	Axilla, liver and pneum.	4 months.	
5	Mrs. A.	1 year.	L.	Upper, inner.	Rapid.	Slight.	9 months.	Local and spine.	11 months.	
6	Mrs. B.	3 years.	L.	Upper, outer.	Slow.	Extensive.	4 weeks.	Brain.	5 weeks.	
7	Mrs. B.	no years.	L.	Upper, inner.	Slow.	Extensive.	6 months.	Liver and stomach.	14 months.	
8	Mrs. C.	no active, 1 yr.	L.	Upper.	Very rapid.	Very slow.	1½ years.	Liver.	21 months.	
9	Mrs. K.	6 months.	R.	Lower, middle.	Rapid.	Well marked.	14 months.	Axillary glands.	Well, 10½ yrs.	
10	Mrs. Y.	1 year.	R.	Lower, middle.	Slow.	None.	13 months.	Opposite breast.	Well, 10 years.	
11	Miss K.	1 year.	R.	Outer, middle.	Slow.	Well marked.	18 months.	Abdominal viscera.	8½ after 1st; 7 after 2 oper.	
12	Mrs. R.	9 months.	R.	Outer, middle.	Medium.	Well marked.	18 months.	Spine.	22 months.	
13	Mrs. P.	3 months.	L.	Upper, outer.	Rapid.	Very extensive.	1 year.	Scalp.	28 months.	
14	Mrs. P.	6 months.	R.	Upper, outer.	Rapid.	Slight.	3-4 years.	Chest.	3½ years.	
15	Mrs. W.	5 weeks.	R.	Lower, middle.	Rapid.	Well marked.	3½ years.	Local.	5 years.	
16	Mrs. M.	6 months.	R.	Central.	Rapid.	Slight.	4½ years.	Stomach.	4 years.	
17	Mrs. G.	18 months.	R.	Lower, inner.	Slow.	Very extensive.	6 months.	Axilla.	6 months.	
18	Mrs. T.	2 years.	R.	Upper, outer.	Slow.	Well marked.	1 incom.	Liver, kidney, left breast.	Well, 4 y., 3 m.	
19	Mrs. H.	2 years.	R.	Upper, outer.	Very rapid.	Absent.	None.	Liver.	Well, 5 years.	
20	Mrs. W.	4 months.	R.	Upper, outer.	Rapid.	Very extensive.	1½ years.	7 years.	7 years.	
21	Miss E.	1 year.	R.	Lower, outer.	Rapid.	Slight.	3 months.	Local and lung.	Well, 3½ years.	
22	Mrs. DeC.	3 months.	R.	Lower, outer.	Rapid.	Well marked.	9 months.	Not known.	Not known.	
23	Mrs. H.	3 years.	R.	Upper, outer.	Slow.	Extensive.	5 months.	Not known.	9 months.	
24	Mrs. B.	8 months.	R.	Upper, outer.	Rapid.	Very extensive.	5 months.	Spine.	15 months.	
25	Miss H.	1 year.	R.	Whole gland.	Rapid.	Slight.	5 months.	Local lung, other breast.	Well, 3 y., 1 m.	
26	Miss S.	2 years.	R.	Whole gland.	Slow.	Medium.	4 months.	Spine.	9 months.	
27	Mrs. P.	15 months.	L.	Whole gland.	Medium.	Very extensive.	4 months.	Lung, skin local.	Well, 3 years.	
28	Mrs. W.	5 months.	L.	Whole gland.	Rapid.	Slight.	1½ years.	Above clavicle.	7 months.	
29	Mrs. R.	3 months.	R.	Lower, outer.	Rapid.	Very extensive.	4 months.	With recurrence.	7 months.	
30	Mrs. S.	8-10 months.	R.	Lower, outer.	Rapid.	Very extensive.	4 months.	Local lung, other breast.	7 months.	
31	Mrs. McN.	active, 1 yr.	L.	Lower, inner.	Slow.	Very rapid.	4 months.	Spine.	8 months.	
32	Miss F.	1 year.	R.	Whole gland.	Rapid.	Well marked.	4 months.	Op. breast, stomach.	1 y., 8 m.	
33	Mrs. K.	1 year.	R.	Middle, outer.	Rapid.	Slight.	4 months.	Marked on left side.	1½ years.	
34	Miss M.	1½ years.	R.	Upper, outer.	Rapid.	Marked on left side.	4 months.	Well, 5½ years.		
35	Mrs. W.	1 month.	R.	Lower, outer (L.).	Rapid.	Marked on left side.	4 months.			

are alive and well from three to ten and one-half years after operation (34.28 per cent.). One is alive after more than three years, but she is at present afflicted with an inoperable recurrence to which she will undoubtedly succumb in the near future.

The radical operation, with removal of both pectoral muscles, but without cleaning out of the suprACLAVICULAR region, was performed thirty times. The breast was removed and the axilla cleared out without removal of the pectoral muscles seven times. (The two additional operations are accounted for by the fact that the remaining breast became involved in two patients and these were subsequently removed.) Ten of the 30 patients upon whom the radical operation was done have recovered (33½ per cent.), while 4 of the 7 upon whom the simpler operation was done are now alive and well (57.15 per cent.). These figures are misleading because in two instances a simple operation was done upon the remaining breasts after radical operations had been done upon the opposite ones. It is rather remarkable that both of these patients recovered and have remained well—one seven and one-half years, and the other five and one-half years after removal of the second breast.

These statistics seem to prove that recurrences and deaths from carcinoma of the breast are unusual after the patient has remained well for three years after the operation. In but 3 of the cases has death from carcinoma occurred after three years; these lived respectively five, four and three and one-half years.

Three patients developed recurrences or metastases after three years; these appeared in four and three-quarters, three and one-half, and three and one-half years after operation. One of these cases is alive and well one year after the removal of a local recurrent growth. The author has met with one fatal recurrence in the axilla fourteen years after the breast had been removed.

These very late recurrences open up the question as to what should be called a recurrence and what should be regarded

as a new development of carcinoma. A discussion of this question is not in order under the present circumstances because all such developments must be regarded as recurrences so far as the purpose of this discussion is concerned.

Two or more operations were performed upon 8 of the 35 patients, the secondary operations having for their object the removal of local recurrences of the disease. Three of these are alive and well more than three years after the last operation.

Twenty-one of the 35 patients operated upon had known of the existence of a tumor in the breast for one year or longer. One patient had had a lump in her breast for upwards of twenty years, but it had remained quiescent until one year preceding the operation. Another lady had known of the existence of a tumor in her breast for ten years, but there were no signs of activity until about six months before the operation. In each of these patients the tumor grew rapidly during the active period and malignancy was well marked. Fourteen of the patients who had known of the existence of a tumor for one year or more died (66 $\frac{2}{3}$  per cent.). One is alive with an inoperable recurrence, and 6 (28.5 per cent.) are alive and well more than three years after operation.

Eight patients knew of the existence of a tumor from six to twelve months prior to operation. Four (50 per cent.) are alive and well; four (50 per cent.) are dead.

Six had been aware of the presence of a tumor for a period of less than six months. Two (33 $\frac{1}{3}$  per cent.) are alive and well; four (66 $\frac{2}{3}$  per cent.) are dead.

The figures seem to indicate that one may not be able to judge of the prognosis very accurately merely by the length of time the patient has known of the presence of a tumor in the breast. It must always be borne in mind, however, that a patient's statement on this point is not apt to very accurate. When this testimony comes from the family physician, or from members of the patient's family it assumes much greater importance. The time given by the patient is always short of the real period of existence.

One remarkable case was that of a lady who had known of the existence of a tumor in her breast for two years. She consulted her local physician and he removed part of the breast, the incision not being sufficiently wide of the involved tissues to prevent an early recurrence. I made a radical operation one year later, and then removed a local recurrence nine months after the second operation. The patient is alive and well four and one-half years after the third operation (Case XIX).

Recurrence above the clavicle took place in but 2 of the 35 cases. This was less frequent than were recurrences in the opposite breast (5 cases).

Lymphoedema of the arm supervened in 5 of the patients. Three of these died in less than three years; one is alive but with extensive recurrences, and very extreme lymphoedema (Case XXX). The swelling gradually disappeared under treatment in the remaining patient (Case XX).

The function of the arm is good in all of the surviving patients. None of them complain of weakness or inability to use the member.

Twenty-eight of the patients comprising the material for this report were married, 7 were spinsters. Ten of the married and 2 of the single women recovered (36 and 28.6 per cent. respectively).

Statistics based upon this very limited number of cases indicate that the location of the primary growth has some bearing upon the prognosis. Central growths and those located in the lower third of the breast give a much larger percentage of recoveries than do growths located elsewhere.

The average duration of life after operation (in fatal cases) was twenty months; the extremes being five years, and five months.

The average time of recurrence was fourteen and one-quarter months—the extremes being fifty-six and three months.

An estimation, such as the above, based upon the mere existence of cancer of the breast without any consideration of the actual conditions present at the time of operation will

give a very fair idea of the average results obtainable in the general run of cases, without any elimination of cases unsusceptible of cure through operative measures. One may, however, in fairness exclude from these statistics those cases in which operation was simply undertaken as a palliative measure, and thus obtain a better idea of what results may be accomplished in cases more carefully selected. This more careful discrimination is only possible through more careful education of physicians and of the general public. Fourteen of the 35 cases in this report were beyond the possibility of cure through operation, and in each of these cases operation was undertaken with the hope of prolonging life or to remove offensive, ulcerated breasts. If we subtract these 14 cases and estimate our mortality upon the cases in which there was a reasonable hope of success we then have 21 patients, 12 of whom recovered—a percentage of recovery of about 57.6.

The matter of prognosis in an individual case will always remain a doubtful one, even though the surgeon has had a very considerable experience with this class of cases. Seemingly favorable cases sometimes progress to a fatal termination, whereas one is sometimes pleasantly surprised by having an unpromising case go on to recovery.

The most potent factor bearing upon prognosis is the character of the growth. The richly cellular, rapidly growing, soft, succulent carcinomata are much less amenable to surgical treatment, even when seen early in the course of the disease, than are the more fibrous, slowly growing, hard varieties of the disease. A successful outcome is not probable in the former variety unless operation is undertaken very, very early, because secondary foci of development are planted soon after the primary growth makes its appearance.

One is justified in looking upon the operative treatment of cancer of the breast as being far from an ideal method of treatment, even with the extensive removals practiced at the present time. The hope for the future lies in better prophylaxis and in a better knowledge of the nature of the disease.